SEQUENCE LISTING



<110> Feng, Lili Chen, Sizhong Xia, Yiyang

<120> DIAGNOSTIC AND THERAPEUTIC METHODS RELATED TO
REGULATING ENERGY MOBILIZATION WITH OB PROTEIN AND OB
ANTIBODIES

<130> SCR1832S

<140> 09/194,889

<141> 1999-08-23

<150> PCT/US97/09684

<151> 1997-06-04

<150> 60/018,972

<151> 1996-06-04

<160> 11

<170> PatentIn Ver. 2.1

<210> 1

<211> 2793

<212> DNA

<213> Mus musculus

<400> 1

ggatccctgc tccagcagct gcaaggtgca agaagaagaa gatcccaggg aggaaaatgt 60 gctggagacc cctgtgtcgg ttcctgtggc tttggtccta tctgtcttat gttcaagcag 120 tgcctatcca gaaagtccag gatgacacca aaaccctcat caagaccatt gtcaccagga 180 tcaatgacat ttcacacacg cagtcggtat ccgccaagca gagggtcact ggcttggact 240 tcattcctgg gcttcacccc attctgagtt tgtccaagat ggaccagact ctggcagtct 300 atcaacaggt cctcaccagc ctgccttccc aaaatgtgct gcagatagcc aatgacctgg 360 agaatctccg agacctcctc catctgctgg ccttctccaa gagctgctcc ctgcctcaga 420 ccagtggcct gcagaagcca gagagcctgg atggcgtcct ggaagcctca ctctactcca 480 cagaggtggt ggctttgagc aggctgcagg gctctctgca ggacattctt caacagttqq 540 atgttagccc tgaatgctga agtttcaaag gccaccaggc tcccaagaat catgtagagg 600 gaagaaacct tggcttccag gggtcttcag gagaagagag ccatgtgcac acatccatca 660 ttcatttctc tccctcctgt agaccaccca tccaaaggca tgactccaca atgcttgact 720 caagttatcc acacaacttc atgagcacaa ggagggcca gcctgcagag gggactctca 780 cgggtacatg ttcctccgtg ggtacacgct tcgctgcggc ccaggagagg tgaggtaggg 900 atgggtagag cctttgggct gtctcagagt ctttgggagc accgtgaagg ctgcatccac 960 acacagctgg aaactcccaa gcagcacacg atggaagcac ttatttattt attctgcatt 1020

```
ctattttgga tggatctgaa gcaaggcatc agctttttca ggctttgggg gtcagccagg 1080
atgaggaagg ctcctggggt gctgctttca atcctattga tgggtctgcc cgaggcaaac 1140
ctaatttttg agtgactgga aggaaggttg ggatcttcca aacaagagtc tatgcaggta 1200
gcgctcaaga ttgacctctg gtgactggtt ttgtttctat tgtgactgac tctatccaaa 1260
cacgtttgca gcggcattgc cgggagcata ggctaggtta ttatcaaaag cagatgaatt 1320
ttgtcaagtg taatatgtat ctatgtgcac ctgagggtag aggatgtgtt agagggaggg 1380
tgaaggatcc ggaagtgttc tctgaattac atatgtgtgg taggcttttc tgaaagggtg 1440
aggeatttte ttacctctgt ggccacatag tgtggctttg tgaaaaggac aaaggagttg 1500
actettteeg gaacatttgg agtgtaceag geaceettgg aggggetaaa getaeaggee 1560
ttttgttggc atattgctga gctcagggag tgagggcccc acatttgaga cagtgagccc 1620
caagaaaagg gtccctggtg tagatctcca aggttgtcca gggttgatct cacaatgcgt 1680
ttettaagea ggtagaegtt tgeatgeeaa tatgtggtte teatetgatt ggtteateea 1740
aagtagaacc ctgtctccca cccattctgt ggggagtttt gttccagtgg gaatgagaaa 1800
tcacttagca gatggtcctg agccctgggc cagcactgct gaggaagtgc cagggcccca 1860
ggccaggctg ccagaattgc ccttcgggct ggaggatgaa caaaggggct tgggtttttc 1920
catcacccct gcaccctatg tcaccatcaa actggggggc agatcagtga gaggacactt 1980
gatggaaagc aatacacttt aagactgagc acagtttcgt gctcagctct gtctggtgct 2040
gtgagctaga gaagctcacc acatacatat aaaaatcaga ggctcatgtc cctgtggtta 2100
gaccctactc gcggcggtgt actccaccac agcagcaccg caccgctgga agtacagtgc 2160
tgtcttcaac aggtgtgaaa gaacctgagc tgagggtgac agtgcccagg ggaaccctgc 2220
ttgcagtcta ttgcatttac ataccgcatt tcagggcaca ttagcatcca ctcctatggt 2280
agcacactgt tgacaatagg acaagggata ggggttgact atcccttatc caaaatgctt 2340
gggactagaa gagttttgga ttttagagtc ttttcaggca taggtatatt tgagtatata 2400
taaaatgaga tatcttgggg atggggccca agtataaaca tgaagttcat ttatatttca 2460
taataccgta tagacactgc ttgaagtgta gttttataca gtgttttaaa taacgttgta 2520
tgcatgaaag acgtttttac agcatgaacc tgtctactca tgccagcact caaaaacctt 2580
ggggttttgg agcagtttgg atcttgggtt ttctgttaag agatggttag cttataccta 2640
aaaccataat ggcaaacagg ctgcaggacc agactggatc ctcagccctg aagtgtgccc 2700
ttccagccag gtcataccct gtggaggtga gcgggatcag gttttgtggt gctaagagag 2760
gagttggagg tagattttgg aggatctgag ggc
                                                                  2793
```

<210> 2 <211> 3862 <212> DNA <213> Mus musculus

<400> 2

gtcgaccac gcgtccggag gaatcgttct gcaaatccag gtgtacacct ctgaagaaag 60 atgatgtgtc agaaattcta tgtggttttg ttacactggg aatttcttta tgtgatagct 120 gcacttaacc tggcatatcc aatctctccc tggaaattta agttgttttg tggaccaccg 180 aacacaaccg atgactcctt tctctcacct gctgagccc caaacaatgc ctcggctttg 240 aagggggctt ctgaagcaat tgttgaagct aaatttaatt caagtggtat ctacgttcct 300 gagttatcca aaacagtctt ccactgttgc tttgggaatg agcaaggtca aaactgctct 360 gcactcacag acaacactga agggaagaca ctggcttcag tagtgaaggc ttcagttttt 420 cgccagctag gtgtaaactg ggacatagag tgctggatga aaggggactt gacattattc 480 atctgtcata tggagccatt acctaagaac cccttcaaga attatgactc taaggtccat 540 cttttatatg atctgcctga agtcatagat gattcgcctc tgccccact gaaagacagc 600

```
tttcagactg tccaatgcaa ctgcagtctt cggggatgtg aatgtcatgt gccggtaccc 660
 agagccaaac tcaactacgc tettetgatg tatttggaaa tcacatetge eggtgtgagt 720
 tttcagtcac ctctgatgtc actgcagccc atgcttgttg tgaaacccga tccaccctta 780
 ggtttgcata tggaagtcac agatgatggt aatttaaaga tttcttggga cagccaaaca 840
 atggcaccat ttccgcttca atatcaggtg aaatatttag agaattctac aattgtaaga 900
 gaggetgetg aaattgtete agetacatet etgetggtag acagtgtget teetggatet 960
 tcatatgagg tccaggtgag gagcaagaga ctggatggtt caggagtctg gagtgactgg 1020
 agttcacctc aagtctttac cacacaagat gttgtgtatt ttccacccaa aattctgact 1080
agtgttggat cgaatgcttc ttttcattgc atctacaaaa acgaaaacca gattatctcc 1140
tcaaaacaga tagtttggtg gaggaatcta gctgagaaaa tccctgagat acagtacagc 1200
attgtgagtg accgagttag caaagttacc ttctccaacc tgaaagccac cagacctcga 1260
gggaagttta cctatgacgc agtgtactgc tgcaatgagc aggcgtgcca tcaccgctat 1320
gctgaattat acgtgatcga tgtcaatatc aatatatcat gtgaaactga cgggtactta 1380
actaaaatga cttgcagatg gtcacccagc acaatccaat cactagtggg aagcactgtg 1440
cagctgaggt atcacaggcg cagcctgtat tgtcctgata gtccatctat tcatcctacg 1500
tctgagccca aaaactgcgt cttacagaga gacggctttt atgaatgtgt tttccagcca 1560
atctttctat tatctggcta tacaatgtgg atcaggatca accattcttt aggttcactt 1620
gactcgccac caacgtgtgt ccttcctgac tccgtagtaa aaccactacc tccatctaac 1680
gtaaaagcag agattactgt aaacactgga ttattgaaag tatcttggga aaagccagtc 1740
tttccggaga ataaccttca attccagatt cgatatggct taagtggaaa agaaatacaa 1800
tggaagacac atgaggtatt cgatgcaaag tcaaagtctg ccagcctgct ggtgtcagac 1860
ctctgtgcag tctatgtggt ccaggttcgc tgccggcggt tggatggact aggatattgg 1920
agtaattgga gcagtccagc ctatacgctt gtcatggatg taaaagttcc tatgagaggg 1980
cctgaatttt ggagaaaaat ggatggggac gttactaaaa aggagagaaa tgtcaccttg 2040
ctttggaagc ccctgacgaa aaatgactca ctgtgtagtg tgaggaggta cgtggtgaag 2100
catcgtactg cccacaatgg gacgtggtca gaagatgtgg gaaatcggac caatctcact 2160
ttcctgtgga cagaaccagc gcacactgtt acagttctgg ctgtcaattc cctcggcgct 2220
tcccttgtga attttaacct taccttctca tggcccatga gtaaagtgag tgctgtggag 2280
tcactcagtg cttatcccct gagcagcagc tgtgtcatcc tttcctggac actgtcacct 2340
gatgattata gtctgttata tctggttatt gaatggaaga tccttaatga agatgatgga 2400
atgaagtggc ttagaattcc ctcgaatgtt aaaaagtttt atatccacga taattttatt 2460
cccatcgaga aatatcagtt tagtctttac ccagtattta tggaaggagt tggaaaacca 2520
aagataatta atggtttcac caaagatgct atcgacaagc agcagaatga cgcagggctg 2580
tatgtcattg tacccataat tatttcctct tgtgtcctac tgctcggaac actgttaatt 2640
tcacaccaga gaatgaaaaa gttgttttgg gacgatgttc caaaccccaa gaattgttcc 2700
tgggcacaag gactgaattt ccaaaagcct gaaacatttg agcatctttt taccaagcat 2760
gcagaatcag tgatatttgg teetettett etggageetg aacceattte agaagaaate 2820
agtgtcgata cagcttggaa aaataaagat gagatggtcc cagcagctat ggtctccctt 2880
cttttgacca caccagaccc tgaaagcagt tctatttgta ttagtgacca gtgtaacagt 2940
gctaacttct ctgggtctca gagcacccag gtaacctgtg aggatgagtg tcagagacaa 3000
ccctcagtta aatatgcaac tctggtcagc aacgataaac tagtggaaac tgatgaagag 3060
caagggttta tccatagtcc tgtcagcaac tgcatctcca gtaatcattc cccactgagg 3120
cagtetttet etageagete etgggagaea gaggeecaga eatttteet tttateagae 3180
cagcaaccca ccatgatttc accacaactt tcattctcgg ggttggatga gcttttggaa 3240
ctggagggaa gttttcctga agaaaatcac agggagaagt ctgtctgtta tctaggagtc 3300
acctccgtca acagaagaga gagtggtgtg cttttgactg gtgaggcagg aatcctgtgc 3360
acattcccag cccagtgtct gttcagtgac atcaggatcc tccaggagag atgctcacac 3420
tttgtagaaa ataatttgag tttagggacc tctggtgaga actttgtacc ttacatgccc 3480
```

```
caatttcaaa cctgttccac gcacagtcac aagataatgg agaataagat gtgtgactta 3540 actgtgtaat ctcatccaag aagcctcaag gttccattcc agtagagcct gtcatgtata 3600 atgtgttctt ttattgttgt ggatgtggga gacaagtgtc agaatctagt gtgaaaatga 3660 ttgtttcaa actaagtgtg tctattttct ctcagtaata caatgaaaca tatgaggaag 3720 ccctcattaa tctagtaatg tagatggact cttactgaat atattcccaa gatacttggg 3780 gaagtctccc taattctagc taaaaataaa cccaggaata gaactactaa acactgaatc 3840 tggaaaaaaa aaaaaaaa ag
```

<210> 3 <211> 1974 <212> DNA

<213> Mus musculus

<400> 3

aagtctccag ggcagagagg gagtcaactc attggcgctt gagtcggcaa agaaatcaag 60 atggccaaag ttcctgactt gtttgaagac ctaaagaact gttacagtga aaacgaagac 120 tacagttctg ccattgacca tctctctctg aatcagaaat ccttctatga tgcaagctat 180 ggctcacttc atgagacttg cacagatcag tttgtatctc tgagaacctc tgaaacgtca 240 aagatgtcca acttcacctt caaggagagc cgggtgacag tatcagcaac gtcaagcaac 300 gggaagattc tgaagaagag acggctgagt ttcagtgaga ccttcactga agatgacctg 360 cagtccataa cccatgatct ggaagagacc atccaaccca gatcagcacc ttacacctac 420 cagagtgatt tgagatacaa actgatgaag ctcgtcaggc agaagtttgt catgaatgat 480 tccctcaacc aaactatata tcaggatgtg gacaaacact atctcagcac cacttggtta 540 aatgacctgc aacaggaagt aaaatttgac atgtatgcct actcgtcggg aggagacgac 600 tctaaatatc ctgttactct aaaaatctca gattcacaac tgttcgtgag cgctcaagga 660 gaagaccagc ccgtgttgct gaaggagttg ccagaaacac caaaactcat cacaggtagt 720 gagaccgacc teatitiett etggaaaagt atcaacteta agaactaett cacateaget 780 gcttatccag agctgtttat tgccaccaaa gaacaaagtc gggtgcacct ggcacgggga 840 ctgccctcta tgacagactt ccagatatca taaaagcagc cttatttcgg gagtctattc 900 acttgggaag tgctgacagt ctgtatgtac catgtacagg aaccttcctc accctgagtc 960 acttgcacag catgtgctga gtctctgtaa ttctaaatga atgtttaccc tctttgtaag 1020 agaagagcaa accctagtgg agccaccccg acatatgata ctatctgtta ttttaaagag 1080 taccctatag tttgctcagt actaatcatt ttaattacta ttctgcatgg cattcttagg 1140 aggatcaaaa agactctaca catattacag atgggttaac aaagggataa aacaactgaa 1200 aagcacactc aatgcatttg gaatataaat tcacagacca atctcactgt gcaccttcgg 1260 cttcaaaatg ccagttgagt aggataaagg tataagaact taatgctgtc attttcaaaa 1320 ggaaggggac aatagctaca tettteetae eteagtgggt tttaeteeag tgagateatt 1380 tggatgaaat cctcctgtaa cagacctcaa gaaggagaca gactgttgaa tgttattttt 1440 aagttatttt atatatgtat ttataaatat atttatgata attatattat ttatggaaca 1500 teettaaate etetgagett gaeaggeate eteacageag gattttetag gtggteagtt 1560 agatatagtt tcctctagag caccatgcta cagactttac actttttcca cagccacgaa 1620 gctctctgta cattcctgta cttgggagcc ctttcatcat gatcttaatc tgtactgttt 1680 actttgttca tctaaaatga taattgagtc agtctttttc cctcccatcc ttaaagctgt 1740 ctgggtattc ttacatcatt cagtctcacc tgtaactaac accaaccatc taaagatgga 1800 aagagettaa etgtgacaac cacatcactg ttacetgaag tttetttet agaatgtaat 1860 cagtgtttcc cctggattcc aattttttt tcaaaccaca gtatcatgta actatcaaca 1920 1974

<210> 4 <211> 1339 <212> DNA <213> Mus musculus <400> 4 tgcagggttc gaggcctaat aggctcatct gggatcctct ccagccaagc ttccttgtgc 60 aagtgtctga agcagctatg gcaactgttc ctgaactcaa ctgtgaaatg ccaccttttg 120 acagtgatga gaatgacctg ttctttgaag ttgacggacc ccaaaagatg aagggctgct 180 tccaaacctt tgacctgggc tgtccagatg agagcatcca gcttcaaatc tcacagcagc 240 acatcaacaa gagcttcagg caggcagtat cactcattgt ggctgtggag aagctgtggc 300 agctacctgt gtctttcccg tggaccttcc aggatgagga catgagcacc ttcttttcct 360 tcatctttga agaagagccc atcctctgtg actcatggga tgatgatgat aacctgctgg 420 tgtgtgacgt tcccattaga cagctgcact acaggctccg agatgaacaa caaaaaagcc 480 tcgtgctgtc ggacccatat gagctgaaag ctctccacct caatggacag aatatcaacc 540 aacaagtgat attctccatg agctttgtac aaggagaacc aagcaacgac aaaatacctg 600 tggccttggg cctcaaagga aagaatctat acctgtcctg tgtaatgaaa gacggcacac 660 ccaccctgca gctggagagt gtggatccca agcaataccc aaagaagaag atggaaaagc 720 ggtttgtctt caacaagata gaagtcaaga gcaaagtgga gtttgagtct gcagagttcc 780 ccaactggta catcagcacc tcacaagcag agcacaagcc tgtcttcctg ggaaacaaca 840 gtggtcagga cataattgac ttcaccatgg aatctgtgtc ttcctaaagt atgggctgga 900 ctgtttctaa tgccttcccc agggcatgtg aaggagctcc cttgtcatga atgagcagac 960 agctcaatct ctaggacact cettagteet eggecaagae aggtegetea gggteacaag 1020 aaaccatggc acattctgtt caaagagagc ctgtgtttcc tccttgcctc tgatgggcaa 1080 ccacttacct atttattat gtatttattg attggttgat ctatttaagt tgattcaagg 1140 ggacattagg cagcactctc tagaacagaa cctagctgtc aacgtgtggg ggatgaattg 1200 gtcatagcct tgcacttgag gtctttcatt gaagctgaga ataaataggt tcctataata 1260 tggatgagaa tttttatgaa tgaagcatta gcacattgct ttgatgagta tgaaataaat 1320 ttcattaaac aaacaaaca 1339 <210> 5 <211> 1629 <212> DNA <213> Mus musculus <400> 5 gctgagggac tagccaggag ggagaacaga aactccagaa catcctggaa atagctccca 60 gaaaagcaag cagccaacca ggcaggttct gtccctttca ctcactggcc caaggcgcca 120 catctccctc cagaaaagac accatgagca cagaaagcat gatccgcgac gtggaactgg 180 cagaagaggc actcccccaa aagatggggg gcttccagaa ctccaggcgg tgcctatgtc 240 tcagcctctt ctcattcctg cttgtggcag gggccaccac gctcttctgt ctactgaact 300 tcggggtgat cggtccccaa agggatgaga agttcccaaa tggcctccct ctcatcagtt 360 ctatggccca gaccctcaca ctcagatcat cttctcaaaa ttcgagtgac aagcctgtag 420

cccacgtcgt agcaaaccac caagtggagg agcagctgga gtggctgagc cagcgcgca 480 acgccctcct ggccaacggc atggatctca aagacaacca actagtggtg ccagccgatg 540

ggttgtacct tgtctactcc caggttctct tcaagggaca aggctgcccc gactacgtgc 600 tecteaceca cacegteage egatttgeta teteatacea ggagaaagte aaceteetet 660 ctgccgtcaa gagcccctgc cccaaggaca cccctgaggg ggctgagctc aaaccctggt 720 atgageceat atacetggga ggagtettee agetggagaa gggggaecaa eteagegetg 780 aggtcaatct gcccaagtac ttagactttg cggagtccgg gcaggtctac tttggagtca 840 ttgctctgtg aagggaatgg gtgttcatcc attctctacc cagcccccac tctgacccct 900 ttactctgac ccctttattg tctactcctc agagececca gtetgtgtee ttetaactta 960 gaaaggggat tatggctcag agtccaactc tgtgctcaga gctttcaaca actactcaga 1020 aacacaagat gctgggacag tgacctggac tgtgggcctc tcatgcacca ccacccacgg 1080 aatcgagaaa gagctatcaa tctggaattc actggagcct cgaatgtcca ttcctgagtt 1140 ctgcaaaggg agagtggtca ggttgcctct gtctcagaat gaggctggat aagatctcag 1200 geetteetae etteagaeet tteeagaete tteeetgagg tgeaatgeae ageetteete 1260 acagagocag coccoctota tttatatttg cacttattat ttattattta tttattattt 1320 atttatttgc ttatgaatgt atttatttgg aaggccgggg tgtcctggag gacccagtgt 1380 gggaagetgt etteagacag acatgtttte tgtgaaaaeg gagetgaget gteeceaeet 1440 ggcctctcta ccttgttgcc tcctcttttg cttatgttta aaacaaaata tttatctaac 1500 ccaattgtct taataacgct gatttggtga ccaggctgtc gctacatcac tgaacctctg 1560 ctccccacgg gagccgtgac tgtaattgcc ctacgggtca ttgagagaaa taaagatcgc 1620 ttggaaaag 1629

<210> 6 <211> 4110 <212> DNA <213> Mus musculus

<400> 6

gagactetgg ceceaeggga cacagtgtea etggtttgaa aetteteage cacettggtg 60 aagggactga gctgttagag acacttctga ggctcctcac gcttgggtct tgttcactcc 120 acggagtagc ctagtcaact gcaagagaac ggagaacgtt ggatttggag cagaagtgca 180 aagtotoaga catggottgo cootggaagt ttotottoaa agtoaaatoo taccaaagtg 240 acctgaaaga ggaaaaggac attaacaaca acgtgaagaa aaccccttgt gctgttctca 300 geecaacaat acaagatgae eetaagagte accaaaatgg eteecegeag eteeteaetg 360 ggacagcaca gaatgttcca gaatccctgg acaagctgca tgtgacatcg acccgtccac 420 agtatgtgag gatcaaaaac tggggcagtg gagagatttt gcatgacact cttcaccaca 480 aggccacate ggattteact tgcaagteea agtettgett ggggteeate atgaaceeca 540 agagtttgac cagaggaccc agagacaagc ctacccctct ggaggagctc ctgcctcatg 600 ccattgagtt catcaaccag tattatggct cctttaaaga ggcaaaaata gaggaacatc 660 tggccaggct ggaagctgta acaaaggaaa tagaaacaac aggaacctac cagctcactc 720 tggatgaget catetttgee accaagatgg cetggaggaa tgteeetege tgeateggea 780 ggatecagtg gtecaacetg caggtetttg acgeteggaa etgtageaca geacaggaaa 840 tgtttcagca catctgcaga cacatacttt atgccaccaa caatggcaac atcaggtcgg 900 ccatcactgt gttcccccag cggagtgacg gcaaacatga cttcaggctc tggaattcac 960 ageteateeg gtaegetgge taccagatge eegatggeae cateagaggg gatgetgeea 1020 ccttggagtt cacccagttg tgcatcgacc taggctggaa gccccgctat ggccgctttg 1080 atgtgctgcc tctggtcttg caagctgatg gtcaagatcc agaggtcttt gaaatccctc 1140 ctgatcttgt gttggaggtg accatggagc atcccaagta cgagtggttc caggagctcg 1200 ggttgaagtg gtatgcactg cctgccgtgg ccaacatgct actggaggtg ggtggcctcg 1260

| aattcccag | c ctgcccctt | c aatggttggt | acatagacac | caagattag | attcasasct | 1320 |
|------------|--------------|--------------|--------------|--------------|--------------|-------------|
| tctgtgacad | c acagegetad | c aacatcctgo | aggaagtgg | r ccdaaddat | a geeegagaet | 1300 |
| cccacacact | t gacctccct | c tggaaagacc | : agactatcac | r ggagatgaet | g ggcccggage | 1 1 1 1 1 0 |
| tccatagttt | ccagaagca | g aatgtgacca | tcatagacca | , ccacacaca | tangactact | 1500 |
| tcatgaagca | a catgcagaat | gagtaccggg | ccataasaa | ctacacage | cayagicci | 1500 |
| gactgatcc | r tocagtatet | - gagtaceggg | cccgtggagg | cegeeegge | gactggattt | 1560 |
| atotoctato | c tocattota | gggagcatca | tagagagat | ccaccaggag | , atgttgaact | 1620 |
| atgagaaget | . deddcccad | tactaccaga | togagecetg | gaagacccac | : atctggcaga | 1680 |
| tetttaette | . gaggeeeage | g aggagagaga | teegatttag | agtcttggtg | , aaagtggtgt | 1740 |
| ttactactac | catyctaate | g cgaaaggtca | tggcttcacg | ggtcagagco | : acagtcctct | 1800 |
| aggettes | gacayyyaac | g tctgaagcac | tagccaggga | cctggccacc | : ttgttcagct | 1860 |
| acgeettea | caccaaggii | gtctgcatgg | accagtataa | ggcaagcacc | : ttggaagagg | 1920 |
| agcaactact | gerggrege | g acaagcacat | ttgggaatgg | agactgtccc | agcaatgggc | 1980 |
| agactctgaa | gaaatctctg | , ttcatgctta | gagaactcaa | ccacaccttc | aggtatgctg | 2040 |
| tgtttggcct | tggctccago | : atgtaccctc | agttctgcgc | ctttgctcat | gacatcgacc | 2100 |
| agaagctgtc | : ccacctggga | gcctctcagc | ttgccccaac | aggagaaggg | gacgaactca | 2160 |
| gtgggcagga | ggatgccttc | : cgcagctggg | ctgtacaaac | cttccgggca | gcctgtgaga | 2220 |
| cctttgatgt | ccgaagcaaa | catcacattc | agatcccgaa | acgcttcact | tccaatgcaa | 2280 |
| catgggagcc | acagcaatat | aggctcatcc | agagcccgga | gcctttagac | ctcaacagag | 2340 |
| ccctcagcag | catccatgca | aagaacgtgt | ttaccatgag | gctgaaatcc | cagcagaatc | 2400 |
| tgcagagtga | aaagtccagc | cgcaccaccc | tcctcgttca | gctcaccttc | gagggcagcc | 2460 |
| gagggcccag | ctacctgcct | ggggaacacc | tggggatctt | cccaggcaac | cagaccgccc | 2520 |
| tggtgcaggg | aatcttggag | cgagttgtgg | attgtcctac | accacaccaa | actgtgtgcc | 2580 |
| tggaggttct | ggatgagagc | ggcagctact | gggtcaaaga | caagaggctg | ccccctact | 2640 |
| cactcagcca | agccctcacc | tacttcctgg | acattacgac | ccctcccacc | cagetgeage | 2700 |
| tccacaagct | ggctcgcttt | ggcacggacg | agacggatag | gcagagattg | gaggccttgt | 2760 |
| gtcagccctc | agagtacaat | gactggaagt | tcagcaacaa | cccacqttc | ctggaggtgc | 2820 |
| ttgaagagtt | cccttccttg | catgtgcccg | ctgccttcct | gctgtcgcag | ctccctatct | 2880 |
| tgaagccccg | ctactactcc | atcagctcct | cccaqqacca | caccccctca | gaggttcacc | 2940 |
| tcactgtggc | cgtggtcacc | taccgcaccc | gagatggtca | ggatccccta | caccataata | 3000 |
| tctgcagcac | ttggatcagg | aacctgaagc | cccaggaccc | agtgcctgc | tttgtgcgaa | 3060 |
| gtgtcagtgg | cttccagctc | cctgaggacc | cctcccagcc | ttgcatcctc | attagaccta | 3120 |
| gtacgggcat | tgctcccttc | cgaagtttct | ggcagcagcg | gctccatgac | toccagoaca | 3180 |
| aagggctcaa | aggaggccgc | atgagcttgg | tatttaaata | ccaacaccaa | gaggagaga | 3240 |
| acctctatca | qqaaqaaatq | caggagatgg | tccccaagag | agtactatta | caggtgaggacc | 3300 |
| caggctactc | ccaactaccc | ggcaaaccca | aggtctacgt | tcaggacatc | ctggegeaca | 3360 |
| agctggccaa | tgaggtactc | agcgttctcc | acquagage | agaccacctc | tagatttaga | 2200 |
| gagatgtgcg | catggctcgg | gatgtggcta | ccacattgaa | gaggedaeete | acattigeg | 2420 |
| tgaacttgag | cgaggagcag | gtggaagact | atttcttcca | actcaagag | gccaccaage | 3400 |
| atcatgaaga | tatcttcggt | gcagtctttt | cctatagaga | anananana | cagaaacgtt | 3540 |
| aggaggggaa | adccacdadd | ctctgacagc | ccaaaattaa | aaaaaagggc | agegeettgg | 3600 |
| gataatggtg | agggggttgg | adadacade | anataganta | agettetgge | actgagtaaa | 3660 |
| attecceet | cctccaccct | ggagacagcg | attatattat | tataasst | tocceatgte | 3720 |
| tectetecte | cctcccctct | accaagtagt | tacattat | tacat | caaatetete | 3/80 |
| ttctccttct | cctccttt | ctccctttcc | toottotto | tanasas | agctccctcc | 3840 |
| acctcctcac | taaaaaaatt | ctctcactct | cocciggage | Lyagagcaga | gaaaaactca | 3900 |
| ttaggtggg | tatatacaca | tgggtgacca | ccaggaggca | ccatgccgcc | gctctaatac | 3960 |
| actoccasta | ataasttaa= | tatttatact | catatttaa | gaaaacagat | acttttgtct | 4020 |
| actoccaatg | attttatt | cctttcctgt | ataattcctt | gatgaaaaat | | |
| aatacatttt | allitaatca | aaaaaaaaa | | | | 4110 |

```
<210> 7
 <211> 465
 <212> DNA
 <213> Rattus norvegicus
 <400> 7
 ggcatcatgg ctgcccttcg gcctctggtg aagcccaaga tcgtcaaaaa gaggaccaag 60
 aagttcatca ggcaccagtc ggaccgatat gtgaaaatta agcgaaactg gcggaaaccc 120
 agaggcatcg acaacagggt gcggagaaga ttcaagggcc agatcctgat gcccaacatt 180
ggttacggga gtaacaagaa aaccaagcac atgctgccta gcggcttccg gaagtttctg 240
gtccacaatg tcaaggagct ggaagtgctg ctgatgtgca acaaatctta ctgtgctgag 300
attgctcaca atgtgtcctc taagaaccga aaagccatcg tagaaagagc agcacagctg 360
gccatcagag tcaccaatcc caacgccagg ctacgcagcg aagagaatga atagatggct 420
tgtgtgcctg ttttgtgttc aaataaaacc acaaaaactg ccaaa
                                                                    465
<210> 8
<211> 21
<212> DNA
<213> Mus musculus
<400> 8
gctatcgaca agcagcagaa t
                                                                   21
<210> 9
<211> 22
<212> DNA
<213> Mus musculus
<400> 9
tgaacacaac aacataaagc cc
                                                                   22
<210> 10
<211> 26
<212> DNA
<213> Mus musculus
<400> 10
tgttatatct ggttattatt gaatgg
                                                                   26
<210> 11
<211> 27
<212> DNA
```

<213> Mus musculus

<400> 11 cattaaatga tttattatca gaattgc

27